

NORTHEAST FISHERIES OBSERVER PROGRAM

OBSERVER SAMPLING IN THE SCALLOP FISHERY

The observer collects information about the trip on various levels, described here as Trip Information, Gear Characteristics, Haul Information, Incidental Take Information, and Length and Biological Sampling Information. This guide will help to describe what the observer will be working on during this trip.

Trip Information

The Vessel and Trip Information Log includes the vessel name and hull number, port sailed and landed, and dates and times of trip. The observer should ask the captain for the expected trip duration, the homeport of the vessel, VTR Serial Number(s), and the target species and captain's experience for any gears used, soaking, or stowed onboard the vessel.

Some economic data on the costs of fishing is collected. The observer will ask the vessel owner and/or operator for the costs of expendables (ice, fuel, gear) and fixed costs (repairs, electronics, insurance).

At the end of the trip, the observer will ask for the dealer where most of the catch was sold, the number of bags offloaded, and the average weight per bag.

Gear Characteristics

This information will be obtained for all dredges being fished and will also be updated during the trip if something on the dredge changes (i.e. the twine top or rings are replaced, etc.):

- dredge frame – frame height and width and indicate presence of pressure plate;
- chains – the number of rock or tickler chains; standard or turtle chain configuration;
- twine top – ten inside mesh of twine top, measured with calipers; and
- chain bag – whether chafing gear was used; the average number of links between the rings and the link stock size; the inside ring size of ten rings from both the top and bottom of the bag; and the outside ring size from one ring on the bottom of the bag.

Haul Information

The observer's protocols differ if a haul is "on-watch" ("observed" or "unobserved"), or "off-watch".

For observed hauls, the observer must be present on deck to record and sample the kept and discarded catch.

For unobserved hauls, the observer does not have to have complete discard information, but should still obtain the haul information and the kept catch information. They are present for the haul, but circumstances prevent them from fully sampling the haul, such as limited visibility or time to view catch, or safety factors that limit their accessibility to the work deck.

For off-watch hauls, the observer is catching up on some rest and is generally in the galley or in their bunk.

They do not have to be present for the tows, however they must later obtain the information on time and position of the tows and amounts of kept scallops. They will depend on the captain's cooperation to complete an Off-Watch Haul Log or will request access to the trip logs to obtain the required information.

For on-watch hauls, the observer must record:

- date, time, and location when fishing begins and ends;
- weather information, depth at haul begin, tow speed, wire out, water temperature, and bottom type;
- weights of all catch onboard for every observed haul, trying to get as many actual weights as possible (sub-sampling protocols must be followed and will depend on the vessel's configuration and amount of catch); and
- Average pounds per orange bushel basket (basket) of kept and discarded scallops once per watch and the number of baskets of both for every haul. The observer will ask a crew member to shuck a basket of scallops once per watch. In access areas, meat weights are used for the average dressed pounds per basket. In-the-shell weights are used for open area trips for the average round pounds per basket (but meat weights are still needed for the volumetric sampling described below). The scallops must be crew-shucked (rather than the observer doing it), so the weight is representative of what the vessel is landing.

The observer should adapt to the vessel's watch periods (6-hours, 8-hours, or 12-hours generally) and initially follow one of the watches, with observed tows during the on-watch and requesting the off-watch information during the off-watch periods. At approximately the midpoint of the trip, the observer should switch to the opposite watch in order to ensure collection of data most representative of the entire trip. This is dependent on the watch schedule that the vessel maintains. The observer must not disrupt any of the off-watch crew if they are resting in their cabins.

Incidental Take Information

An incidental take is any interaction between the fishing gear and a marine mammal (dolphin, seal, or whale), sea bird, or sea turtle. It is critical for the observer to be informed immediately if a take occurs. Incidental take sampling is a priority over all other observer duties. If an incidental take occurs, the observer must do the following (depending on condition of the animal):

- photograph the animal to document overall condition and confirm species identification;
- obtain a DNA sample;
- attach an individual tag identifier so that animals are not double counted and can be tracked if recaptured;
- collect body measurements, body temperature, and determine the sex of the animal;
- examine and sketch marks and scars detailing the take event; and
- collect other biological samples (even whole animals when possible).

The occurrence of an incidental take is generally rare, however when it does occur, it is a unique opportunity to obtain biological information that can not be obtained through any other method. Biological information is used by scientists to study life history patterns, contamination loads, migratory patterns, health of stocks, and food habits that could help explain how, why, and when interactions with fishing gear occurs.

Length and Biological Sampling Information

At a minimum, the observer will conduct biological sampling every other observed haul during the observer's on-watch period. Scallop sampling is the first priority with finfish sampling being second. The observer must:

- record shell heights, shucked meat weight, and volume of meats for 100 kept scallops;
- record shell heights for 100 discarded scallops; and
- record finfish length frequencies and age structures as a first priority for at least one haul per watch. Finfish priorities are listed in the Biological Sampling Manual and are dependent on the area fished. If a haul has an exceptionally large amount of finfish bycatch, finfish sampling should become first priority. Age structures include scales, ear bones, vertebrae, or spines, depending on the species of fish. Size-at-age information is an important indicator of stock abundance. If any tagged fish or scallops are caught, the tag number and size of the animal is recorded. Tag recapture information is provided to the appropriate tagging organization and the captain is entitled to any associated rewards.

Observer Gear

You should expect to see the following gear brought onboard by the observer, at a minimum: finfish length frequency board, scallop shell height board, volumetric container for meats, spring scale, scoopmaster for water temperature, calipers, tape measure, manuals, field guides, reference sheets, and incidental take sampling kits. Additional gear may also be brought onboard.

Observer Handouts

At the completion of the trip, the observer should offer the captain a Fishermen's Comment Card and a Data Release Form to request of copy of the trip.

If you have any questions about observer duties and requirements or have concerns or comments about an observer's performance, please contact the National Marine Fisheries Service, Northeast Fisheries Observer Program at (508) 495-2266.

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